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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,187	09/26/2003	Tracy C. Denk	51241/RJP/B600	9844

23363 7590 05/20/2004

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EXAMINER

MAI, TAN V

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

**Application No.**

10/672,187

**Applicant(s)**

DENK ET AL.

**Examiner**

Tan V Mai

**Art Unit**

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/22/2003.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Art Unit: 2124

1. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the terms "substantially" are indefinite and/or misdescriptive. The equations " $\hat{X} = n + s_i$ " and " $\hat{X} = n + y$ " are incorrect because; (1) "n" is number of bit and (2) " $s_i$ " & "y" should be "fractional parts". The Examiner suggests the preamble:

(1) " $X = X_i + 0.X_{fb}$ "; i is integer part & fa is fractional part of X;

(2) " $\hat{X} = X_i + 0.X_{fb}$ "; fb is fractional part of X.

Therefore, the equation " $\hat{X} = n + s_i$ " should be -- " $\hat{X} = X_i + 0.X_{fb}$ --; where  $X_{fb} = X_b + s_i$  ( $X_b$  is original part of "b" fractional part. The equation " $\hat{X} = n + y$ " should be -- " $\hat{X} = X_i + 0.X_{fb}$ --; where  $X_{fb} = X_b + y$ . The period "." at the end is missing. Similarly noted claim 3.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Juri et al ,EP 0 469 841 A, (Applicants admission Prior Art) or Juri et al '563 (Applicants admission Prior Art).

As per independent 1, Juri et al disclose, e.g., see Figs. 7, 8a & 8b, the invention substantially as claimed, including: input (21), OR gate (30), AND gate (23) and adder (24). The examiner analyzes the reference as follow: (1) "fourth least significant bit",

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see Figs. 7, 8a & 8b, is considered the claimed "y as the most significant bit of the a bits"; and (2) the MSB, see Figs. 7, 8a & 8b, is considered the claimed sign bit "s<sub>i</sub>". It is noted that Juri et al do not specifically detail the rational (integer and fractional) number, X; however, the claimed rounding method is similar to the rounding integer number. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to design the claimed invention according to Juri et al's teachings because the device is a data round-off device as claimed.

As per claims 2, the feature is obvious to a person having ordinary skill in the art.

Due to the similarity of claim 3-4 to claims 1-2, they are rejected under a similar rationale.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final	(703) 746-7238
Official	(703) 746-7239
Non-Official/Draft	(703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



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TAN V. MAI  
PRIMARY EXAMINER